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ABSTRACT

Position papers presented by the Association for Children with Learning Disabilities at the White House Conference on Children and Youth are contained in the collection. Beginning with an address by Dr. Samuel Kirk on his personal reflections and comments on learning disabilities, Dr. Sylvia Richardson offers the medical views on learning disabilities and Doris Johnson focuses on educational requirements and educational programming with learning disabilities. (CD)

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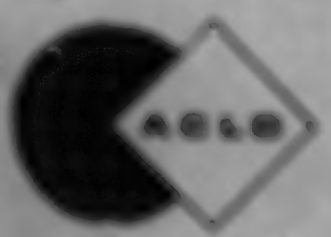

Children with disabilities in the church of the 70s

A Statement of Position from the White House Conference on Children and Youth

The Association for Children With Learning Disabilities, Inc.
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[redacted] CONFERENCE ON [redacted] AND YOUTH

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F O R E W O R D

The Association for Children with Learning Disabilities (ACLD) is proud and pleased to participate in the 1979 White House Conference on Children and Youth. It is most appropriate that an organization representing parents of children who are educationally handicapped participate in the conference. At the time of the White House Conference on Children and Youth in 1960, the ACLD had not yet even been born. Today, a little over six years since the inception, ACLD has more than 50 affiliates in thirty-seven states, the District of Columbia, and the Virgin Islands. This rapid growth reflects the growing concern of both parents and professionals.

ACLD's purpose is to advance the education and welfare of children with specific learning disabilities. As parents, we are acutely aware of the gap which exists between our goals and dreams for our children, and the help which our children actually receive. Because of this awareness, the members of ACLD have dedicated their lives to creating awareness and resolution of our children's problems among all who should be concerned. For, it is often said that the first step in solving a problem is recognizing that the problem exists. We are also aware that despite the efforts of dedicated teachers, large numbers of children are falling behind and too often staying behind in their scholastic achievement. The magnitude of the problem is beginning to receive widespread attention and the figures staggering.

The National Reading Council has advised that as estimated 24 million Americans, 13 years old and older, have already left school without learning to read, to write, or to do arithmetic well enough to function in today's technologically oriented job market. Moreover, there are probably another 21 million workers who will be denied employment, because they are poor readers. The problems of reading, and this is just one area of learning disabilities, is of particular urgency to industry. Twenty-five years ago, 11% of available jobs were held by unskilled workers. Today, the figure is 13%. By 1975, with increased use of automation, only 2% jobs will fall into the unskilled category. According to the National Center for Health Statistics, 11% of American 11 year olds read at levels two or more years below grade level, 18% of 13 year olds read two years below grade level, and 13% of 17 year olds read two years below grade level.

The challenge is before us. Education must be designed to meet children's unique individual potentialities. For some

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children, because of the difficulties they have in learning, special opportunities must be provided. The Association for Children With Learning Disabilities pledges its assistance and efforts to meet this challenge.

Sincerely,

Peter J. Spaulding, President
Association for Children with Learning Disabilities, Inc.

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[illegible]

As we begin each decade, it is traditional that we take stock of our progress in national endeavors and express hopes and plans for the future.

The following address delivered by Dr. Samuel Kirk at the Advanced Institute for Leadership Personnel in Learning Disabilities in December 1968 so completely expresses our philosophy that we are including it as the introduction of our position statement for the White House Conference on Children and Youth.

[illegible]

[illegible]
by:
Dr. Samuel O. Klark
University of Arkansas

Dr. Owen, distinguished guests, ladies and gentlemen. It [illegible] me to return and address an AAA convention in the state of [illegible]. The [illegible] is especially [illegible] me to address my alma. I hope there is a person in the audience who can give me directions.

My first aim in accepting the required portions of an address is [illegible] characteristic and inspiring [illegible]. In this field, such a [illegible] helps to arouse interest for those who can show that they have taken a measure of success in a field and can advance a [illegible] from agencies such as the State Department of Public Instruction. I must confess to you, that the [illegible] of speech [illegible] to [illegible] have been a [illegible] source [illegible] and "learning disabilities." In these two areas, according to our present criteria for [illegible] personal [illegible]. I must admit that I do not qualify. But I also have a speaking [illegible], although I have not [illegible] and the [illegible], that my colleagues on this panel may be in a similar embarrassing predicament.

I have, however, had some experience. My first encounter with the problem of learning disabilities came about by accident in the early 1950's. As a graduate student at the University of Chicago I accepted a job as "assistant instructor" in a small [illegible] school for delinquent [illegible] in Cook County [illegible] Chicago. Participants did so, in those days they did not require a special teacher's [illegible].

At this school I taught in the afternoon and served as a counselor/[illegible] after school and then in the evening helped the [illegible] get the boys in bed and quiet and see that they stayed in bed.

In reading one of the criminal [illegible] from the then famous [illegible] for juvenile [illegible] that plagued these children, I noticed that one of the boys was labeled "word blind," a term I had never heard before in my psychology courses. My son at [illegible], a non-reader, and had a recorded IQ of 81. This criminal folder was referred to Samuel Kenner's monograph on reading disabilities, Strauss[illegible]'s book on [illegible] Brain Injured, and Orton's [illegible] method. After reading these references, I managed to [illegible] this boy at it's school in the evening after the boys were asleep. This boy, who was eager to learn,[illegible] out of him at the opportune time with sight and not as it a small [illegible] between the two [illegible] words and [illegible], in the

[illegible] of a boys' school. By making this arrangement we both have an extra consulting & supervisor taking on an urban area where the human nature had distorted me not to allow them much of that after 5 p.m.

After I had been tutoring the boy for two weeks, the nurse sought me teaching this boy at 10 p.m. She, consequently gave me a threatening look with the statement that this was impossible requirements and that I should find time to teach him during the day.

But since this was impossible, and since he was making such rapid progress, we just continued the sessions in spite of the rules and regulations. When we heard the nurse's footsteps coming down the stairs, they crept on the floor flat and we were on the moment the big nurse's shadow into the boys' room. I mention this incident to show certain hardships I must go to here that my first experience in counseling [illegible] was conducted not in a school, not in a clinic, not in an experimental laboratory, but in a boys' lavatory!

In every worthy view, this boy was reading. I went him to the Institute for Juvenile Research nearby across away and learned through a social worker that he was reported now to be reading on the third grade level and on this basis they had obtained a parole for him from the judge of the Juvenile court. I was also invited to go to the Institute for Juvenile Research in Chicago and confer with Dr. Marion Monroe on the method I used to teach him in such a short period of time. After this conference she agreed to hire me in diagnosis and remediation of severe cases of reading disabilities.

At this time, in the early 1930's, the Wayne County Training School in Michigan was looking for a psychologist with a master's degree who had an emphasis in reading disabilities with the mentally retarded. Due to very extensive experience of teaching two children and writing a Master's Thesis on the Monroe method, I was selected for the job. I mention this fact to indicate to you how few people at that time worked in this particular area.

At this institution, I found 60+3 children had many disabilities: reading disabilities, language disabilities, mathematical disabilities, and behavior disabilities. I was fortunate to have the opportunity to teach and conduct research on children with a variety of disabilities and a variety of problems.

At this time, in the early 1930's there was great emphasis on basic theory and disabilities. This was even before Gestalt.

disease reading, mixed dominance and handedness, strephosymbolia, pathological brain dysfunctions were proposed to explain all of these abnormalities. It became obvious to me that to understand all of these language, perceptual and reading disability problems, I had to understand the workings of the brain. So, at the University of Michigan, I concentrated on courses in physiological and experimental psychology, and on neurology. I even did my doctor's thesis by testing the handedness of rats and training them to discriminate between an "F" and a mirrored "F." After surgically producing brain lesions, and retesting the rats after post-operative recovery, I made autopsies to determine the effects of brain lesions on perception and handedness and to determine whether I could change dominance and create a strephosymbolia in rats. I then proceeded to publish monographs and articles with esoteric titles such as, "Hemispheric Isolation: Dominance and Hemispheric Potentiality," or "Differentiated Functions in the Discrimination of Complex Visual Patterns in the Rat."

The point I wish to make after this digression into the recesses of the brain is to confess here that studying physiological psychology and neurology and my own research on the brains of rats, have had no relationship to what I did then, or have done since, or what I do now for children with learning disabilities. And it is for this reason that I am not concerned with terms of brain dysfunction or brain damage, or even with terms such as "strephosymbolia," "word blindness," "alexia," or "dyslexia" behavioral terms that the child has not learned to read.

After four years at the Wayne County Training School and the University of Michigan, I acquired a union card, which in academic circles is called a Ph.D. With this handle, I was offered a job as Director of a Division of Exceptional Children at the Milwaukee State Teachers College in 1935. Similar to the practice today at colleges and universities, that particular college had to have Ph.D.'s for accreditation whether the personnel could train teachers or not.

To learn about education and teaching, I enrolled in a practical university. At this university, my professors who taught me about education and special education, in particular, did not have Ph.D.'s. They were classroom teachers who allowed me to sit in their classes day in and day out to study and evaluate their methods and to ask naive questions. I continued in this post-doctoral college for three years in between teaching my college courses. I roamed from class to class trying to learn what different teachers were doing, and after three years of this post doctoral training by classroom teachers I gave myself a diploma since the teachers of the Practical University were not authorized to give credits or certificates.

Another of my aims here back to about 1969 when I established the first experimental nursery school for so-called 'mentally retarded children.' Working with 3-6 year olds diagnosed as mentally retarded in an institution, and also in the community, we found that environmental intervention at an early age accelerated intellectual and social functioning of these children. We also found many examples of learning disabilities which, of course, were not labeled as such.

In trying to teach these young children, we were forced to look into their behavior and guess at what might have been wrong with their development, what deficits existed in each child, and to decide on what to do about these particular deficits.

The label 'mentally retarded' did not help us very much. One child with marked nystagmus as a result of rubella was diagnosed as legally blind and severely mentally retarded. This child could see, but it took her a long time to recognise objects and pictures visually. She needed training in speed of perception. We had no tests at that time because Frostig was a little slow and had not yet published her perceptual tests. A program for this girl in her area of disability was highly successful since with intensive training on a tachistoscope to increase her speed of perception, the girl progressed rapidly in speed of perception and also in performance on intelligence tests. She was later placed in regular grades rather than in a class for the mentally retarded since her IQ had risen from approximately 50 at age four to about 85 at age six, and at the age of 10 she was doing adequate third grade work in a regular class in spite of all the problems that she had had earlier.

Another child with the same label 'mentally retarded' and with a recorded IQ on the Binet (which was invalid) of 37, was unable to talk at the age of five. She was given intensive training in auditorisation and speech. The remedial training for this girl was not visual perception, but auditory perception and verbal expression.

As we analysed and worked with many of these children mostly on a trial and error basis, we found that each child had some peculiar block or inhibition to development. I'm sure we wasted a lot of time trying to pinpoint basic disabilities in these children and in organising a general pre-school program which included an individualised remedial program for each child's unique obstacles to development.

To be able to analyse the communication problems of younger children at the outset or before remediation, it becomes

necessary for us to develop tests to isolate some of these abilities and disabilities. And, I guess, this is where my other major job took place. After fifteen years of work by a large staff, we developed the Illinois Test of Psycholinguistic Abilities. This diagnostic test was designed to isolate abilities or disabilities found in young children. The experimental edition published in 1961, that is, McCarthy and I turned out became a real godsend to a lot of doctoral candidates since approximately twenty doctoral theses have been written on the ITPA. So if the test has not done anything else, it has at least earned twenty doctorate degrees for twenty people.

Unfortunately, this test has also spawned many illusions and false hopes. Some people have taken the ITPA as the instrument for the cure for all ills and the diagnosis of all problems. In spite of our numerous warnings, it is used for junior high school students even though it is for young children. Many also use it for problems for which the ITPA does not apply. Furthermore, many people want to use it without taking the time to learn how to give it. And, many people give the ITPA routinely and use it very mechanically. My aim here is to impose an instrument on the public that is very beneficial for the diagnosis of disabilities of some children within a restricted age range which some desire to use without the necessary preparation or clinical judgment. This is our common fault in all areas of learning disability because I'm sure that Dr. Gephart and Dr. Frostig and others will agree that their methods are also used with children to which their procedures do not apply.

The last sin which I shall mention publicly--I'm sure there are many others--is the small part I had in sponsoring the use of the term, "learning disabilities." Like Pandora's box, it has forced upon us many ills in spite of the many benefits. This is how it had happened. Parent groups throughout the United States who were involved in organizing programs for their children were using different terms such as "classes for brain injured children," "classes for the perceptually handicapped," or "classes for the neurologically impaired." These groups met in Chicago in April of 1963 to form a national organization. They called the conference "Exploration into the Problems of the Perceptually Handicapped Child." They invited a number of consultants including, I believe, Dr. Gephart, Dr. Kirk(hart and myself. Just before the meeting the chairmen agreed on that they were going to get up to give them a term and a name for the association which they were planning to organize.

At this meeting I stated that if the purpose of the association is research on etiology that they ought to use a neurological term. But if their aim was services to children

with disabilities, then the name should be related to education and training rather than to etiology. The focus of the name I suggested should be on behavioral assessment and special methods to ameliorate the learning disorder, the learning inhibition or the disability, whatever they wish to call it. I suggested that the term "learning disability" might focus attention on the learning problems and on instruction whereas the term "brain injury" would have etiological meaning but would have little or no relation to how the child is to be taught.

I did not attend their business meetings, but I understand the three common labels, "brain injury," "perceptually handicapped," and "brain injured" were discussed. They voted to call the organization the Association for Children with Learning Disabilities, which since then has grown to great proportions. Since then, the term "learning disabilities" has become very widely used and is included as the term in a recent congressional bill which is entitled, "The Learning Disabilities Act of 1969." Dr. Bayhurt and Dr. Bublahurt were at that meeting and tended to agree with this term even though it may not be the best term.

But the simple solution of a name has not really been so simple. I now have that the term "learning disabilities" has created many problems. We have had a bandwagon effect. To some, every child has a learning disability. The prevalence figures given by different groups in congressional testimonies have ranged from 15-30%. It appeared for a while that a third of the school population could identify in this category. It has even been suggested that "mentally retarded children" be labeled "general learning disabilities" and that we can call the others "specific learning disabilities." Parents have brought their children to learning disability centers for diagnosis because their children were not obtaining straight "A's" in school. But if they were not obtaining straight "A's" and they were their children, they must have a learning disability.

This is the bandwagon effect of a new and popular concept. It is for this reason that the National Advisory Committee for Handicapped Children, of which I have had the privilege of serving as chairman, has stated that specific learning disabilities in federal legislation constitute the hard core group and consist of about 1-3% of the school population. But until research defines the other groups and their program, we might stick with that particular figure rather than to indicate that a third of the school population can be classified as "specific learning disabilities." I will need elevation for my part in committing the sin of not only helping the popularization of the term, but also delaying its use in the field.

The title given me for this address is, "Definitions and Concepts." As far I have ascertained on my own, as requested by the sponsors of this Institute, I shall make a few remarks I especially suppose.

1. Learning disabilities as a concept is not new to special education. Only the label is new. Specific clinical work in these areas has been done in medicine, speech pathology, reading clinics, corrective physical education, orthoptic training, communications, language disorders and other fields. Today the learning disability specialists have synthesized these fields into academic programs for school children in schools. This has required an educational model rather than a medical model in which a child is assessed from a behavioral point of view rather than from an etiological point of view. Consequently, the treatment of disabilities become focused on education and training.

2. The concept of learning disabilities/assumes what I have called intra-individual differences. This means that we have, in a sense, redefined individual differences to emphasize the comparison of child's abilities and disabilities instead of just comparing child with child for classification purposes. The general terms of intelligence are necessary but not sufficient for identifying the disability and organizing remediation to ameliorate the disabilities. As a result of this emphasis, the problems of children with learning disabilities have forced us to reject the testing instruments that do not lead to a hypothesis for remediation. To give a test such as a general intelligence test and classify a child in a particular category is not enough to help a teacher teach the child. We have, consequently, begun to invent tests that would show us discrepancies in growth--what abilities and disabilities a child has rather than just a global test score. The tests of Bayley and Doman, Kirkham, Frostheard and the ITPA are not just classification tests, but tests to define for us what kind of remediation a child needs.

3. The learning disability concept has led to the concept of clinical teaching to ameliorate disabilities in children. Although we have always given lipservice to individualization of instruction we have always continued mass education, reduced only to class size. We are finding that even children placed in classes for the mentally retarded, educationally retarded, or emotionally disturbed do not readily fit into any category, and that they profit more from a program of remediation of deficits that from group instruction in a class in which they do not belong.

c. The concept of learning disabilities is changing the organization, instruction, materials, and techniques of special education. I expect many children with remediable defects will, in the future, remain in the regular grades and receive itinerant, remedial instruction by a specialist. Itinerant specialists and resource rooms in elementary schools will tend to reduce the enrollment in self-contained, special classes for some groups such as the mentally retarded and the emotionally disturbed.

d. My experience in research on learning disabilities leads me to the conclusion that we should identify these children early and institute remedial measures at ages four and five. We have sufficient evidence to show that better results are obtained when we start at an earlier age than at an older age. We should not wait until the child has failed in school at the age of seven, eight, nine, or ten before we begin to remediate the disability.

e. We have used clinics that special education is not apart from, but a part of, general education. Many handicapped children in self-contained classes have been denied sufficient contact with other children. Learning disability programs that are becoming fairly popular in this country, I'm glad to say, may be our bridge between special education and regular education, especially if we keep children with specific learning problems in the regular grades and give the regular teachers itinerant help.

f. None of these suggestions can really be successful until we are able to train a new kind of special educator, which I currently like to call a diagnostic remedial specialist. What we need is a core of such people who are interdisciplinarily trained and competent in both psychoeducational diagnosis and in remediation. In the past, we have had a team of pediatricians, psychologists, neurologists and social workers diagnose a child and then turn his case to a teacher without the diagnostic team outlining the remedial program for that teacher. Sometimes it looks as if everybody's business is nobody's business. What we need is a focal agent in the form of a diagnostic remedial specialist who is responsible for the treatment or remediation. This would be parallel to a family physician who diagnoses, obtains diagnostic help others, but who is the responsible agent for treatment. Similarly, in learning disabilities, the assistant to other disciplines can funnel through the diagnostic remedial specialist who does the remediation or instructs and supervises others in remediation and helps the classroom teacher adapt instruction and materials to the disability of the child. Until we have a sufficient number of these diagnostic remedial specialists who can do the job themselves, who can help the classroom teacher, and who can supervise others, the field of learning disabilities will be severely handicapped.

Dr. Drollinger closed his remarks by stating that it took him three decades to learn and that he has two more decades to go to learn even more. I'd like to state, since I'm much older than Dr. Drollinger, by being a very young man, that I have had four decades to learn and I'm going to take me three more decades to unlearn. Thank you.

o o o

Dr. Sylvia O. Richardson, a participant at the White House Conference for Children and Youth, fulfills what to one of the central roles in meeting disabilities in her paper ...

[illegible]

Ralph H. Dickerson, M.D.
Associate Clinical Professor of Pediatrics
University of Cincinnati College of Medicine

When we speak about learning disabilities it is important to define our terms. In this meeting we are not discussing children who have difficulty in learning in general nor do we refer to children who have particular or specific difficulties in learning whether those whose behavior is such that they cannot concentrate or attend when we try to teach them. The difficulties or disabilities in learning most commonly demonstrated by these youngsters are in the areas of language and/or mathematics.

Since the large majority of these children are not identified as having specific learning disabilities until they are placed in specific learning situations, they generally are not discovered or diagnosed until they have been in school for varying periods of time. Initially they may be described by their teachers as presenting behavior problems, they may be referred to by their kindergarten teachers as "immature" or "late bloomers"; they may be labeled as "emotionally disturbed."

When a child persists in a typical behavior and does not master the basic skills of the primary curriculum, or even attempt to do so, he may be called "a slow learner" initially, or "mentally retarded."

He is then submitted to a battery of psychological tests, the results of which do not add up to mental retardation, physical examinations and perhaps an EEG, both of which often are reported as within normal limits or "equivocal"; and the parents are questioned in depth with regard to all facts influencing child, of course, arouse suspicion and require further exploration. These procedures may continue for an extensive period of time. Meanwhile, the child may begin to feel like some kind of a freak, the parents undergo the tortures of guilt (we glibly do try of the common guilt feelings that parents tend to have in relation to their child-rearing abilities), the teacher becomes increasingly frustrated at the point that the "devil" in her class may soon be exorcised, and the physician may begin to think that he is dealing with a group neurosis, or he may simply feel that if everyone could just wait the child would grow out of it.

Who is the child in the midst of the hassle? What do we know about him? We know that the child currently labeled

"specific learning disability" is not intellectually
subnormal, yet he has not been able to master the
basic skills in the primary grades. On the basis of
clinical observations, he shows evidence of some emotional
disorder, but, as Eisenberg has stated, "It should be
clear that emotional disorder is almost inevitably a con-
sequence of the repeated frustration entailed in trying, but
being unable, to learn to read."

"Unable to learn to read." Here, then, is something
else we know about this child. The probability is great
that his "specific learning disability" is demonstrated in
an inability to learn to read. In fact, most of the litera-
ture on "specific learning disabilities" actually discusses
specific language disorders and/or specific behavior dis-
orders. A language disorder is the inability of the child to
use symbols for communication purposes and may be characteri-
zed by difficulties in speaking, reading and/or writing.
Thus, we know that this child probably has a specific impair-
ment of reading. It is recommended that a reading
disability be used in defining an "specific" dyslexia, al-
though this does not rule out a multitude of names, e.g., Word
Blindness (Kussmaul, 1877), Congenital Verbal Amnesia,
Congenital Dyslexia, Congenital Alexia, Congenital Dyslexia
(1887), Severe Visual Memory, Developmental Alexia,
Developmental Visual, Dysphasia, Educational Cerebral,
Constitutional Dyslexia, Specific Dyslexia (Hallgren), Specific
Reading Disability, Children Who Cannot Read (Monro, 1932).

Classroom teachers have provided much assistance in
diagnosis through their description of reading problems they
have observed. Among the characteristics of the children with
specific reading problems, teachers report the following:

1. Poor visual discrimination and memory for words.
2. Poor auditory memory for words or for individual
sounds in words.
3. Persistent reversals of words, syllables or letters
in reading, writing and speech. Examples of re-
versals of letters, reversed sequence of letters and
syllables, mirror-writing, or transposition of
numbers.
4. Poor recall for reproduction of simple geometric
forms.
5. Poor memory for auditory or visual sequence.
6. Poorly established handedness.
7. Clumsiness and poor hand control.
8. Immature articulation.
9. Hyperactivity and distractibility.

[illegible]

[illegible]

Psychologists have reported visuo-motor and perceptual-motor problems in these children. Although it may be noticeably deficient, for the sake of simplicity, perceptual-motor impairment in the case of common function of either the peripheral processes (vision, auditory or haptic), the motor processes (speaking, writing, manipulating, marching), or both. If the child's motor difficulty is in academic situations [illegible] what he sees, the problem may be described as visuo-motor. If the child's motor difficulty is in academic [illegible] what he hears, it may be described as visuo-motor. Again, the teachers have described these findings in the classroom, but in their own terminology.

Physicians, neurologists, and psychologists have described the following physical signs of difference between these children and those who learn the three R's:

1. Mild tremor, especially on effort, mild choreiform or athetoid movements.
2. Hyperactivity.
3. Impulsive responses.
4. Emotional crises on minor social behaviors.
5. Disturbances of body image
   a. Right-left confusion and dysnomia of, or really autotopagnosia, synesthesia.
   b. Finger agnosia or impairment of finger-localizing ability.
   c. Impaired spatial concept.

c. impaired form perception
f. immature articulation
g. hyperkinetic behavior with distractibility, short attention span, irritability and emotional lability.

Acknowledging the risks of over-classification and preconception, these children seem to exhibit signs of disorganization in the integrative perceptual-motor mechanisms of the brain. The number of environmental or conceptual-set effect the way a child perceives sensory information, the result can be seen in his behavior but the disorganization may not be appreciated by the observer until the child is of school age and fails to perform tasks that depend on perceptual-motor or behavioral organization which should have taken form earlier in development.

As stated earlier, kindergarten teachers tend to describe the behavior of some children as "immature." These same children often prove to have learning disabilities later in the primary grades. Twelve kindergarten and first grade teachers were asked to list what they believed to be the major characteristics of the "immature" child's behavior. In reviewing their descriptions, the most outstanding behavioral characteristics of the "immature" kindergartner appear to be inadequate language skills, poor motor coordination and insufficient attention span. His behavior was described most frequently as disorderly and disorganized rather than hyperkinetic. His input and motor output were thought to be excessive and without separation of contextual structure. Teachers reported that this child tends to speak and act without thinking, and when compared with normal peers the "immature" child requires much more auditory, visual, tactile and kinesthetic reinforcement. He is described as clumsy and "closer to the ground," sloping and overly dependent on the teacher. The "immature" child, in general, seems to lag appreciably one year behind his school classmates in terms of performance in school activity, physical appearance, social and emotional interactions, and learning ability.

Now, if we re-view our child with "specific learning disability" as seen through the well-trained eyes of the physician, teacher, and psychologist, his identifying characteristics include the following (an insert is shown the percentages of the three disciplines will agree): (1) poor auditory memory; (2) poor auditory discrimination; (3) poor visual blending; (4) poor visual memory; (5) poor visual discrimination; (6) inadequate ability in visual and visual-motor sequencing; (7) lack of, or weakly established, cerebral dominance; (8) right-left confusion, with problems in directionality and directionality; (9) fine motor incoordination; (10) non-specific awkwardness or clumsiness; (11) motor impulsiveness; and (12) attention deficit and distractible or hyperkinetic behavior.

Although this child may show evidence of emotional maladjustment and immaturity, the relationship of cause and effect is not clear. The final observation, on which all agree, is that this youngster is of at least average intellectual capacity.

Those of us whose job is diagnosis sometimes create impressive labels and proceed with vigor to pin them on individuals rather indiscriminately. We create "syndromes" (you know, these are several signs and symptoms which tend to occur together, characterizing a particular disease. A syndrome is a bigger and better label.

Ever since Strauss described the behavior of children with a known history of brain damage, we have lumped together hyperactivity, short attention span, distractibility, irritability, and emotional lability into the "Straussian syndrome," or, more recently, "the hyperkinetic syndrome." Because children with learning disorders often show similar behavior at home and in school, the label "brain damage" fell into place. (For that matter, it has been noted that harried young mothers of pre-school children also may show this kind of behavior!)

Many dislike using the term "brain damage" if there is no evidence of such. In fact, the Oxford International Study Group on Child Neurology in 1962 held a conference, the main achievement of which was the decision that that concept of "damage" be discarded.

Since the diagnosis of learning disabilities is made on the basis of symptoms of disordered function rather than on evidence of anatomical damage, the term "minimal cerebral dysfunction" is currently and justifiably more popular. Because of the heterogeneity of this group of children, it may be helpful to review T.T.S. Ingram's clinical classification in which he defines three main categories within the concept of minimal cerebral dysfunction:

(1) Defined clinical syndromes with constant evidence of abnormality.

In this group there is strong evidence of a fairly constant association between brain abnormality and particular symptoms and signs. In this category he includes the choreiform syndrome of Prechtl, the syndrome of overactive purposeless behavior known as the hyperkinetic syndrome, and the definite focal neurological abnormalities such as mild unsteadiness with intention tremor, mild ataxia, mild paresis of movement, and involuntary movements found in some clumsy children. The disorders included in this category comprise recognizable clinical syndromes in which the history or evidence of brain damage is fairly constant. For example,

children with Prechtl's choreiform syndrome usually have a history of perinatal hypoxia. Evidence of temporal lobe damage may be found in a high proportion of children showing hyperkinetic behavior. In general, the same causal factors that are found in cerebral palsy may be found in most of these patients. Many, in fact, are regarded by some as having mild cerebral palsy, and the disorders are classified appropriately. For example, children with the so-called choreiform syndrome are appropriately classified as having mild dyskinesia or choreoathetosis.

Though there seems to be a relatively constant association between brain injury or abnormality and the disorders described in this category, it is important to remember that environmental factors may influence the symptoms. Hyperkinetic behavior, for example, seems almost self-perpetuating in some children whose parents themselves over-react to the child's unpredictable outbursts or apparently unprovoked tantrums. The magnitude of behavior abnormality depends greatly on the parents' reaction to the child's abnormal behavior (Prechtl, 1961; Pond, 1961).

(2) Defined clinical syndromes with inconstant evidence of brain abnormality.

Ingram's second category comprises those disorders of learning where, in some patients, but not in all, there is evidence of an association between the disorder and detectable brain injury or abnormality. In this category he includes specific retardation of speech development, which he calls developmental dysphasia, "specific developmental dyslexia" and dysgraphia, and some cases of "clumsiness." Sometimes a history of brain injury can be found. For example, specific difficulties in reading and writing following measles encephalopathy are quite common (Meyer and Byers, 1952); but in a high proportion of patients with reading and writing difficulties there is a lack of other evidence suggesting that brain damage has occurred.

Before assuming that slow speech development, or clumsiness, or specific difficulties in writing or reading are the result of brain dysfunction, it is well to remember that there is a wide distribution of ability in children. For example, though the vast majority of children have IQ's between 90 and 110, a few normal children are well below average and a few are above average intelligence. Similarly, while some children are very dextrous others show less than average dexterity and may be called clumsy. Some apparently normal children say their first words before the age of nine months and others may not speak until over the age of two years.

Secondly, it must be remembered that many of these disorders can occur in generation after generation of apparently normal children. For example, slow speech development and specific difficulties in reading and writing often associated with ambidexterity or poor lateralization of handedness are relatively common in the families of Campbell and Maclean in Scotland. Are we then to assume that all Campbells and Macleans have brain abnormalities?

A major factor, which is often ignored, is the influence of environmental factors in producing specific clinical manifestations. A high proportion of children with retarded speech development, for example, have a history of being neglected by, or separated from, their parents in later infancy.

(3) Behavioral symptoms in which brain abnormality may be an inconstant direct cause or an indirect contributory cause.

The third category includes disorders of behavior in which brain damage may be a contributory factor in a proportion of patients. There are a large number of these. Characteristics of the behavior of children with "brain damage" are said to be: unpredictable variability of behavior, hyperactivity, distractibility, impulsiveness, irritability, and difficulties in abstract thinking. Anxiety and emotional immaturity often may be found also. These syndromes include most of those for which children are referred to Child Guidance Clinics. Apart from hyperactivity of the characteristic type which has been described, all these disorders may occur in the absence of any suspicion of brain injury. Yet a significant proportion of the patients can be shown to have either a history highly suggestive of birth injury, or minor neurological signs which alone are of little importance, but which, in combination with these symptoms, may indicate that the brain is functioning abnormally.

Such a variety of symptoms and signs cannot be ascribed to the direct effect of brain injury, but abnormality of the brain in such patients may have contributed to the behavior abnormalities by damaging the infant's ability to adjust to the conditions in which he finds himself. These difficulties in adjustment are commonly reflected very early in the feeding situation, and this in turn may initiate maternal anxiety and a chain of events resulting in further disturbances in the mother/child relationship. There are some excellent studies that describe mothers' difficulties in making good relationships with abnormal babies. (Iggo, 1960; Pavlehi, 1961). However, it is necessary to differentiate between the normal child in an abnormal environment and the abnormal child in a normal environment; in either case behavior is disturbed.

It is almost impossible to assess the contribution made by brain abnormality to the emotional disturbances shown by children in this category. Certainly babies who have recovered from the effects of perinatal brain damage may continue to suffer in later life from the disturbances of mother/child relationship which have resulted from the original difficulty. In order to understand the behaviour of a particular patient it may be helpful to know that there has been brain injury, but this discovery does not lessen in any way the need for adequate assessment of the environmental causes of emotional stress (Eisenberg, 1957; Pond, 1961).

The diagnosis of 'minimal cerebral dysfunction' usually is made on the basis of clinical behaviour, history, psychological evaluation, neurological signs, and EEG findings. The psychological evaluation includes tests of: verbal and non-verbal intelligence, perceptual ability, language development (including comprehension, vocabulary, motor speech function, reading readiness and reading skills) and behavioural characteristics. With regard to the EEG, in spite of the lack of agreement in this field, the high frequency of borderline records reported may be significant. For instance, the 6 and 14-per second positive spiking pattern has clearly been found by Lilliwale and Geiger to be associated with outbursts of violent behavior. This is an important area for research. In general, however, it should be pointed out that the majority of neurological and neurologically oriented articles may not even refer to electroencephalographic findings, or may simply mention these in passing.

The accumulated weight of various signs and symptoms, or the singular specificity thereof (e.g., hyperactivity, dyslexic errors, large scatter or discrepancy between verbal and performance scores on the WISC), guide us in making a diagnosis. These must be evaluated carefully against a background of environmental and interpersonal determinants. At this stage of our knowledge it is logical to assume that any disorganization of brain function due to injury or to naturally occurring constitutional deviation places a handicap on the developing child. If, in addition, the interpersonal environment is unfavorable, the child is more likely to experience problems compounded of his original perceptual defect, his reactions to the attitudes of persons surrounding him, and to his own failures. These accidentally or naturally occurring deviations must exist in a scale from gross to subtle and to different degrees in the various functional and interlocking units within the brain.

Too often we have seen good parents who have a child who cannot learn to read, or who is a behaviour problem, or who is impulsive and hyperactive, or whose speed of maturation is

is distinctly different from his siblings, for us to jump to the conclusion that the parents must have mishandled the child. The prevailing climate of opinion in both professional and "magazine" psychiatry is such as to create in these parents the conviction that somehow, by some magical alteration in their attitudes and behavior, they are to blame for the child's condition.

Possibly we have gone as far as we can, at this time, in our search for cause. We begin to sound too glib. Now is the time to search more diligently for more suitable teaching techniques. It is highly doubtful that we are describing one condition. In fact, when these children are placed in various remedial settings, it becomes apparent that some begin to learn following psychotherapy with medication, some with psychotherapy alone; some begin to learn when they are given visual-motor training; some show marked improvement when they are provided a corrective optical lens and orthoptic training. Some of these youngsters show remarkable improvement with specialized remedial reading such as the Fernald or Gillingham methods; some do well with remedial reading after they have received visual-motor training, and some seem to "grow out of it."

Since we are talking about a heterogeneous group we must turn our attention to closer and more detailed examination of each child, not just in the examining room but in the classroom. In every case where a child demonstrates an atypical approach to learning, there must be an adjustment in the ways the pupil is taught. An effort should be made to make as many adjustments as possible in the regular class, utilizing supplementary tutoring or "resource rooms" when possible. Whenever the severity of the learning disorder reaches certain proportions, class size must be reduced in order to maximize the individual interaction between the teacher and student. Kindergarten and primary teachers must be trained to utilize multisensorial techniques, to provide visual-motor training in the classroom, to search continuously for methods of instruction that will fit a child's needs rather than search for ways to make the child fit a particular method or curriculum.

Very often it is not until a child responds to a particular teaching technique that the underlying cause of his learning disability becomes apparent. Our teachers must receive appropriate training as well as every assistance from consulting psychologists and physicians; school programs of instruction must be flexible enough to permit a continuing search for new teaching methods; and the administrative leadership in the schools must not only allow but encourage experimentation, both with identification procedures and with adjustable methods of instruction.

I should like to close with a quotation from Mr. John Holt's new book,

How Children Fail:

"Some people say of non-readers, 'These children can't or don't read because of the way they use their minds.' Others retort, 'No, they don't read because of the kind of minds they have.' The arguments seem to be unreal as well as useless. The distinction between what our minds are and how we use them is one that exists only for purposes of talk; it does not exist at the level of reality. The mind is not a kind of thinking machine that someone or something inside of us uses, well or badly. It is: and it works, perhaps well, perhaps badly; and the way it works one time has much to do with the way it will work another time.

Religious mystics in India, as we are told, stand for many years with an arm raised, or a limb distorted or imprisoned in some fashion. After a while the limb becomes unusable. What sense does it make to argue whether the cause of this is physical, or lies in the way the limb was used? It was the way it was used that made it the kind of a limb it was, a limb that could not be used in any other way. It is probably true of the mind, as well, that the way we use it determines how he can use it. If we use it badly long enough, it will become less and less possible to use it well. If we use it well, the possibility grows that we can use it even better. We must be wary, then, of assuming that because some learning difficulties seem to be caused by brain dysfunction they are therefore incurable. The brain, as an organ, may have far more flexibility and recuperative powers than we realize. What it cannot accomplish one way it may be able to do another. Conversely, we must be aware of the extent to which, in causing children to make poor use of their minds, we may be making their minds less and less useful to them."

finally

This paper by Doris Johnson, speech and hearing specialist, of Northwestern University, fulfills what we see of the educational requirements . . .

EDUCATIONAL PROGRAMMING FOR CHILDREN WITH LEARNING DISABILITIES

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There are many reasons why children do not learn normally. Some cannot learn; some cannot see; some have limited intellectual potential; some may be poorly motivated; still others may have specific learning disabilities. We special educators are concerned with a large group of exceptional children who do not profit from the normal learning experiences in their home and school environments. All of these children have unique needs; however, the nature of their needs will vary with the type and severity of the disorder.

Our concern here is with children who have specific language and learning disabilities. They do not have sensory deficits nor limited mental capacity. They are not primarily emotionally disturbed nor experientially deprived. They do have a discrepancy between expected and actual achievement in one or more areas of learning such as spoken, read, or written language, mathematics or nonverbal behavior. Their failure to achieve is due to a disturbance in some basic psychological process such as perception, memory or conceptualization.

The population of children with learning disabilities is heterogeneous. Because of the complexity of the human brain and the tasks that children are expected to learn, it is evident that a variety of problems will result from even a minor disturbance. Some learn well visually, but they cannot perceive, interpret, or remember what they hear. Others are good auditory learners but are unable to process visual information. Many have input disturbances while others only have problems of output -- that is, with oral or written expression. Others show variability in integrative and interpretive processing. They may be able to learn via a single sensory channel but they cannot integrate information from two or more modalities. Some can process only certain types of information. For example, they may be able to process verbal or nonverbal information but not both. Still others have marked discrepancies in the level at which they can process material. Whereas some have disorders of perception, others have disorders of memory or conceptualization.

In the normal child all learning processes are relatively intact, which allowances must be made for individual differences. If a child hears, he expects him to understand; if he comprehends

an expert his to speak. If he wears clinic an expert his to be able to read aloud. These same assumptions cannot be made in regard to children with learning disabilities. Instead, various learning systems must be examined to determine the specific nature of the problem.

The evaluation of a child requires the competency of many professional persons, including psychologists, educators, pediatricians, neurologists, ophthomologists and others. Information regarding health, sensory integrity, mental capacity, home and educational background, achievement, personality, and motivation are all basic to the diagnosis. The primary task of the diagnostic team is to determine why the child is not learning. Although many professional persons may be involved in the initial study, the basic management or treatment is educational. While certain children may require medical attention in the form of drug therapy it is not essential for all. Similarly, some children may need counseling or psychotherapy but the primary emphasis pertains to the educational programming. Hence, the most important part of the evaluation is the psycho-educational study which is designed to explore both mental capacities and learning processes. When planning remediation, the teacher must be aware of mental and achievement levels, but she also must know how a child learns or does not learn. Knowing only that a child performs at a second grade level on a reading or spelling test is inadequate information for outlining goals. Without consideration for learning processes, the methods used is to vague or even inappropriate.

One of the most effective means of gathering information about a child's learning is task analysis. By analyzing tasks, including the nature of the input, the expected output, and the processes necessary to complete them, a teacher can begin to understand the patterns of success and failure. Furthermore, an emphasis on task analysis will shift the educator's orientation from subject matter of the curriculum to learning processes.

To analyze tasks along the following dimensions. First we look at the nature of the input. Does the task involve processing (i.e. the modality or processing that is required) (e.g. reading)? For example, some reading tasks involve only visual learning -- the child is asked to draw a line between a picture and the word that goes with it. Others involve integrated learning -- the child is asked to circle a word which the teacher says. While the normal child is able to perform on either task, the child with a learning disability may be able to complete only one type of activity.

Secondly, we note whether a task is verbal or nonverbal. Certain children can perform well on nonverbal activities but not verbal; they recognize or interpret environmental sounds or pictures, but they cannot understand the spoken or printed word. Others are poorest in nonverbal learning; they read well, but they

but they get just going from place to place because of spatial disorders. Certain children with numerical problems cannot interpret gestures and facial expressions normally but they understand words -- that is, verbal symbols.

Next we note whether a task is meaningful or meaningless. Some students cannot work effectively with isolated sounds or nonsense syllables. If they are introduced to reading systems that require memory of letter sounds they fail because they need meaning in order to remember. Others cannot interpret meaningful material. They quickly learn letter names or sounds but they cannot comprehend what they read.

Another part of the analysis pertains to the level of the task. Often learning disabilities are viewed only in terms of a perceptual or a symbolic disturbance. We find that the disturbance may occur at various levels. Hence, the educator together with the psychologist, tries to determine whether the impairment occurs primarily at the level of perception, memory, symbolization, or conceptualization.

Finally, the mode of response is examined. Systems for output can be categorized into three major types. The first involves recognition, articulation, gesture or pantomime. The second is oral language and the third is visual-motor (written). If classroom teachers become more aware of the ways in which they ask children to respond they may realize the reasons for poor performance. For example, a student who scores nearly at grade level on a multiple choice spelling test, but fails on a dictated test, recognizes the correct word, but he cannot convert a word which he hears to the visual system.

Task analysis has three major purposes. First it is done to determine which learning processes are impaired and which are intact. Secondly, when this determination is made the classroom teacher can modify activities so that the learning disabled child can respond more effectively. Parents also can be given suggestions for ways of modifying instructions and activities at home. Finally, task analysis is critical for the special educator so he must know what to "remedy."

In order to be of greatest help to children with learning disabilities, we are obliged to initiate programs of early identification and special education. By doing so, we can shift the emphasis from rehabilitation to habilitation. Every attempt should be made to detect learning problems before a child experiences repeated failure. Programs of early detection are not necessarily synonymous with pre-school identification. Although many disabilities can be identified in early childhood, others will not be manifested until students are exposed to new school systems in school. For example severe auditory perceptual problems can be detected by the age of six or ten months, however, disorders of written language may not be

identified until seven or eight years. Only then the environment places new demands on the learning systems will certain disabilities become evident. In like manner, the limitations of an electrical circuit are apparent only when overloaded with too many appliances.

Programs of early identification, to be most comprehensive, should consist of periodic assessments at crucial periods of development. These "check points" might be compared to the developmental milestones observed by the pediatrician. Our "check points," however, would pertain specifically to learning. In reality, these check points would mark time and concepts or experiences are introduced, but the identification process could be systematized by having psychological/educational types perform screening behaviors on a routine basis. The specific behaviors to be studied would vary with the age of the child and what is expected of him.

Many school systems currently have routine testing programs which could be very useful for early detection of learning disabilities. However, all too often, the test results are utilized only in a gross way to determine whether a student should be promoted or retained, or whether he should be placed in a high or low group. These same test results, including an analysis of raw data, could be used much more effectively. Any low test score or failure constitutes a warning signal -- a signal that something should be done. That "something" should involve a more careful study of the child. It certainly demonstrates the problem may be due to faulty vision or hearing; it others it may be due to poor motivation or study habits. But failures also result from specific learning disabilities. In any case, the reasons for the poor performance should be explored and appropriate recommendations should be made. Identification of a disorder without some educational modification is of little benefit to the child.

The first screening to be initiated in a school system could be arranged prior to kindergarten entrance. The areas of learning to be assessed could include at least the following: (a) hearing and vision; (b) mental capacity; (c) general behavior, play and social skills; (d) auditory behavior including comprehension and expression of language; (e) visual behavior, including various dimensions of visual perception and memory; (f) visual-motor skills; (g) conceptualization, including number, time and space; (h) motor behavior -- gross and fine coordination. The kindergarten teacher, alerted to patterns of strength and weakness, could modify programs and activities accordingly. In large school systems, children could be grouped in rooms where specific skills would be emphasized. Small enrichment kindergartens can be established so that certain children can be observed more carefully. Those designated as having specific learning disabilities might be assigned to a

special teacher to work on the deficits.

Another crucial period for screening follows the year of kindergarten. Readiness tests should be analyzed, not according to an overall state of readiness, but according to learning patterns -- that is, according to strengths and weaknesses. Such an analysis could provide the basis for groupings in the first grade, particularly for reading, writing and language. Children might be grouped according to their styles of learning, not just their rate of learning. While rate is an important variable, it is not always the most significant factor.

During the latter half of first grade, we recommend a more careful study of each child's reading ability. Detailed observations regarding the nature and number of words a child remembers, his comprehension, and his ability to attack new words should be included in the analysis. By second grade, specific attention should be given to writing, spelling and mathematics skills. The child's style of imagery should be observed in order to determine the most effective means for study. Every attempt is made to reduce random recommendations, particularly if the child has an uneven pattern of learning and development.

In the middle grades, all areas of language and academic achievement are important; however, special attention in the screening should be given to written language and to higher levels of conceptualization. Some students are adept at learning the skills for reading and writing, but they cannot conceptualize. Hence, by fourth or fifth grade when they are expected to see relationships, make comparisons, or draw inferences, their integrative problems become more apparent.

At the junior and senior high school levels, in addition to noting specific disabilities, we need to observe the size and balance of the academic load. As indicated previously, the child -- much like an electrical circuit -- has a threshold. Therefore we must avoid overloading. Some students with learning disabilities should be permitted to take a lighter load. Even though they do not have limited mental capacity, they do have thresholds for dealing with quantities of certain types of information. Conceivably, some can take lighter loads and go to summer school; others might plan to go through high school in five years rather than four years.

Identification of learning disabilities and modification of programs may extend through college. While some may terminate their education at the end of high school, those with high mental ability can complete a university program provided they receive special guidance and programming.

Although the earliest proposed plan for identification here was for kindergarten entrance, ultimately the screening programs should begin sooner -- at least by three years of age. With the help of pediatricians, social workers, psychologists, and other professional personnel, dynamic programs could be inaugurated to study infants.

After the children are identified we need special education to meet their needs. The nature of the program will depend upon the severity of the disorder and the multiplicity of involvements. Most communities need at least two broad categories of programs at various age levels. Special classes may be necessary for those children whose learning and adjustment problems are so great that they cannot profit from any regular instruction. Others, however, do not need to be removed from the group all day and can profit from many classroom activities. They can be seen by a learning disabilities teacher for an hour or more each day for work on special problems. Our experience suggests that the majority can remain with their peers for at least part of the day.

Careful planning of an integrated educational program is essential. Decisions regarding the type and number of activities a child can handle are based on discussions with many members of a school staff. One literally "walks" through the child's curriculum to determine in which areas he deviates. It should not be assumed that the learning disabled child is only integrated with his peers during art, music, or gym for these may be his most difficult and overstimulating periods. Integration into regular class activities depends upon the nature of the deficit, the child's level of functioning, and the specific skills or content to be learned.

At the very young ages, programs for nursery schools should be established. The importance of early stimulation cannot be overemphasized. In addition, considerable emphasis should be given to parent education so that the family can understand the child's problem and be of greatest help to him.

Whether the child is seen in a special class or a resource center, one must consider the need for "clinical teaching." We have defined this as individualized instruction based on objective test data and clinical observation (Johnson and Myklebust, 1967). Often we try to clarify the meaning of clinical teaching by describing what it is not. First, clinical teaching is not tutoring in school subjects. Our goal is not merely to keep the student up in his daily assignments, but rather to close the gap between achievement and potential. This means that some work must be done on the learning deficit.

Clinical teaching is not synonymous with overall reduction of goals. Unfortunately, many learning disabled children are placed in slow tracks as a means of helping them. While this plan may be effective in some instances, it is inadequate for a number of reasons. Since the children have at least average ability, many are understimulated in slow groups. Furthermore, many are worried that they are slow or "stupid" and this placement tends to confirm their suspicions. Often self concept is impaired when they are placed with groups of slow children. We emphasize the fact that learning disabled children do not have reduced potential; therefore, we do not necessarily reduce goals. Rather, it is the route to the goal which varies.

Clinical teaching is not merely teaching to assets. Our goal is to raise the deficit. If one works only on the things which the child does well, he may overcompensate to the point where the deficit can never be raised. We see the results of this approach among teen-agers and young adults who were permitted to respond orally in class rather than being taught to read and write. As young adults they are very handicapped in today's society; furthermore, many are still eager to learn.

On the other hand, clinical teaching is not merely teaching to deficits. It seems inadequate to try to raise the "valleys" in a child's psycho-educational profile by bombarding the deficits. For example, if a student has a deficit in auditory perception, the clinical teacher does not only select activities to improve auditory skills. Rather she utilizes each individual's integrities to try to raise the deficit. If the child is good visually, she may encourage the child to watch the speaker's lips; if the child cannot look and listen simultaneously, she may ask the child to close his eyes and listen very carefully to pairs of sounds or words. We attempt to balance the input stimulation so the child can learn.

Clinical teaching is not synonymous with multisensory stimulation. Often it is assumed that if you bomard the child through all sensory modalities he will surely learn. Our experience suggests that some children are overloaded by this approach and fail to integrate the information.

Clinical teaching is not simply a method approach. Rather methods are selected which match the child's style of learning. For example, in reading, one child may have auditory problems so that he cannot learn by a phonic approach which requires sound blending. Another cannot retain a whole word for a "look-say" approach. Therefore, methods are selected which capitalize on their strengths. Meanwhile, every attempt is made to facilitate learning through the impaired sensory channels.

Progress must be evaluated periodically to determine whether the procedures are appropriate. Goals may need to be adjusted from time to time. In some cases, progress is rapid; in others it is slow, but usually improvement can be demonstrated. Prognosis is dependent upon many factors, including overall level of intelligence, motivation, parental cooperation, age of identification, special education and level of aspiration.

Educational programs for children who have learning disabilities are not only justified; they are mandatory if we are to meet the needs of a rather large segment of the population. Without special education, many children will not be able to actualize their potential. Most will remain among the underachievers and, perhaps, will join the ranks of the school drop-outs, and eventually the unemployed. Unfortunately, this is a great waste of human potential. The rationale for special programs might well be taken from Gardner's book, Excellence. Although he was not referring specifically to children with learning disabilities, his eloquent message is pertinent. Gardner states, "The fact that large numbers of American boys and girls fail to attain their full development must weigh heavily on our national conscience. And it is not simply a loss to the individual. At a time when the nation must make the most of its human resources, it is unthinkable that we should resign ourselves to this waste of potentialities. Recent events have taught us with sledge hammer effectiveness the lesson we should have learned from our own tradition -- that our strength, creativity and further growth as a society depend upon our capacity to develop the talents and potentialities of our people." In another instance he says, "What we must reach for is a conception of perpetual self-discovery, perpetual reshaping to realize one's best self, to be the person one could be."

The goals and purposes of education for children with learning disabilities are the same as those for all children. Lest we become bogged down with special techniques and procedures, it is well to review the purposes of education outlined by Inlow (1966). He states that "basically, education has three major purposes: the Transmissive, the Adaptive, and the Developmental. To fulfill the transmissive purpose, education gives continuing stability to life by passing on to each new generation the tried, if not necessarily the true." -- "To fulfill its adaptive purpose, education helps the individual to acquire the skills, the knowledge, and the emotional adjustment needed by him to relate successfully to himself and to his world." -- "To fulfill its developmental purpose, education guides the individual toward his optimum growth, along these same dimensions, at each maturational level". -- "The transmissive, the adaptive, and the developmental are not serially related, rather mutually interacting

and reinforcing. All these relate to man as a holistic organism made up of many parts and to a social order which is, and has ever been, multifaceted and complex.* These are our goals and purposes. Hopefully, with the inauguration of programs of early detection and proper education, these objectives can be attained.

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